

FCC Part 1.1310

RF Exposure Evaluation REPORT

For

FCC ID : M6E-RD1CW

Model : RD1CW

Report Type : Original Report	Product Name : Access Reader
Report Number : <u>RXZ250423085SA01</u>	
Report Date : <u>2025-06-05</u>	
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Facilities : The test site used by Bay Area Compliance Laboratories Corp. (New Taipei Laboratory) to collect test data is located on 70, Lane 169, Sec. 2, Datong Road, Xizhi Dist., New Taipei City 221, Taiwan, R.O.C.	

Statement of Compliance

Applicant (Certification Holder)	CHENG UEI PRECISION INDUSTRY CO., LTD. No.18, Chung Shan Road, Tu Cheng District, New Taipei City, Taiwan, R.O.C.
Brand (Trade) Name	N/A
Product (Equipment) Name	Access Reader
Model Name	RD1CW
Series Model Name	CRD1-CW
Model Discrepancy	The major electrical and mechanical constructions of series models are identical to the basic model. The model, RD1CW is the testing sample, and the final test data are shown on this test report. Please refer to the difference declaration letter provided by the Applicant.

Measurement Procedures and Standards Used:

- FCC Part 2.1091
- FCC Part 1 1.1310

The measurement results in this report were performed at Bay Area Compliance Laboratories Corp. (New Taipei Laboratory)

Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

The determination of the test results does not require consideration of the uncertainty of the measurement, unless the assessment is required by customer agreement, regulation or standard document specification.

Bay Area Compliance Laboratories Corp. (New Taipei Laboratory) is not responsible for the authenticity of the information provided by the applicant that affects the test results.

Report Issued Date : 2025-06-05

Reviewed By : Anson Lu



Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
0.0	RXZ250423085	RXZ250423085SA01	2025.06.05	Original Report	Anson Lu

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1. General Information

Product Description for Equipment under Test (EUT)

Product Name	Access Reader
Frequency Range	13.56 MHz
EIRP Tune-Up Power (dBm)	-23.00 dBm
Modulation Technique	ASK
Sample Received Date	2025/04/23

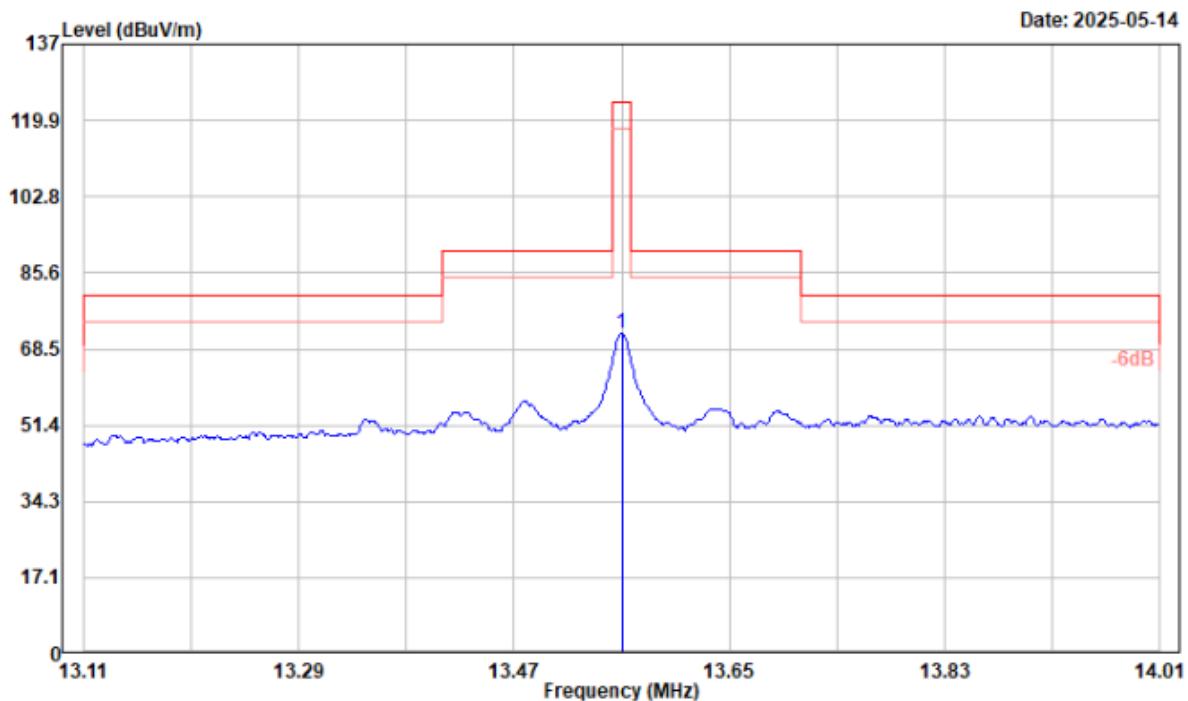
**All measurement and test data in this report was gathered from production sample serial number: RXZ250423085-1 (Assigned by BACL (New Taipei Laboratory)).*

2. RF Output Power Evaluation

Please refer to RF report No: RXZ250423085RF01.

Fundamental :

Description: TX-13.56, RBW:10kHz/VBW:30kHz



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
13.560	60.43	11.58	72.01	124.00	-51.99	100	109	Peak

Antenna List and Details

Modulation	Manufacturer	Antenna Type	Antenna Gain	Input impedance
ASK	Luminys Systems Corporation	PCB	unknown	50Ω

3. FCC §1.1310 - RF Exposure

Applicable Standard

According to subpart §1.1310 (a) Specific absorption rate (SAR) shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in § 1.1307(b) of this part within the frequency range of 100 kHz to 6 GHz (inclusive).

§1.1310 (d)(2) For operations within the frequency range of 300 kHz and 6 GHz (inclusive), the limits for maximum permissible exposure (MPE), derived from whole-body SAR limits and listed in Table 1 in paragraph (e)(1) of this section, may be used instead of whole-body SAR limits as set forth in paragraphs (a) through (c) of this section to evaluate the environmental impact of human exposure to RF radiation as specified in § 1.1307(b) of this part, except for portable devices as defined in § 2.1093 of this chapter as these evaluations shall be performed according to the SAR provisions in § 2.1093.

§1.1310 (d)(3) At operating frequencies above 6 GHz, the MPE limits listed in Table 1 in paragraph (e)(1) of this section shall be used in all cases to evaluate the environmental impact of human exposure to RF radiation as specified in § 1.1307(b) of this part.

For single RF sources (*i.e.*, any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section.

Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

(B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

(C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in

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meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation	
RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	1,920 R^2 .
1.34-30	3,450 R^2/f^2 .
30-300	3.83 R^2 .
300-1,500	0.0128 R^2f .
1,500-100,000	19.2 R^2 .

4. RF Exposure Evaluation Result

Modulation	Freq. (MHz)	EIRP Tune- Up Power (dBm)	Distances (mm)	EIRP Tune- Up Power (mW)	ERP (dBm)	ERP (mW)
ASK	13.56	-23.00	200	0.01	-25.15	0.00

Note : Distance 200mm is the minimum distance between the radiating structure of the RF source and the body of the user or nearby persons.

Calculate the EIRP from the radiated field strength in the far field using Equation

$$\text{EIRP} = \text{EMeas} + 20\log(\text{dMeas}) - 104.7$$

$$\text{EIRP} = 72.01 \text{ dBuV} - 95.2 = -23.19 \text{ dBm}$$

$$\text{EIRP Tune-Up Power} = -23.00 \text{ dBm}$$

§ 1.1307(b)(3)(i)(A) ERP less 1mW.

Modulation	Freq. (MHz)	Result
ASK	13.56	exempt

Result: Compliance.

***** END OF REPORT *****